Amendments to the Specification

Please replace paragraph 2 of the as-filed application, which corresponds to paragraph 1 of Published Application 20030156989, with the following amended paragraph:

The present invention is ~~ralated~~ related to the following co-owned, U.S. patent applications, each of which is hereby incorporated by reference for all purposes: U.S. Ser. No. 60/255,716 filed Dec. 14, 2000 by ~~Safir *et al.*~~ Safir *et al.*, entitled "Parallel Semicontinuous or Continuous Stirred Reactors"; U.S. Ser. No. 60/209,142 filed Jun. 3, 2000 by ~~Safir *et al.*~~ Safir *et al.*, entitled "Parallel Semicontinuous or Continuous Stirred Reactors"; U.S. Ser. No. ~~09/177,179~~ 09/177,170 filed Oct. 22, 1998 by ~~Turner *et al.*~~ Turner *et al.*, entitled "Parallel Reactor with Internal Sensing and Method of Using Same", now U.S. Patent No. 6,548,026, issued April 15, 2003; U.S. Ser. No. 09/211,982 filed Dec. 14, 1998 by Turner *et al.*, entitled "Improved Parallel Reactor with Internal Sensing", now U.S. Patent No. 6,306,658, issued October 23, 2001; U.S. Ser. No. 09/548,848 filed Apr. 13, 2000 by ~~Turner *et al.*~~ Turner *et al.*, entitled "Parallel Reactor with Internal Sensing and Method of Using Same", now U.S. Patent No. 6,455,316, issued September 24, 2002; U.S. Ser. No. 09/239,233 filed Jan. 29, 1999 by Wang *et al.*, entitled "Analysis and Control of Parallel Chemical Reactions", now U.S. Patent No. 6,489,168, issued December 3, 2002; U.S. Ser. No. 09/205,071 filed Dec. 4, 1998 by Freitag *et al.*, entitled "Continuous Feed Parallel Reactor", now U.S. Patent No. 6,485,692, issued November 26, 2002; U.S. Ser. No. 09/174,856 filed Oct. 19, 1998 by Lacy *et al.*, entitled "Graphic Design of Combinatorial Material Libraries"; U.S. Ser. No. 09/420,334 filed Oct. 18, 1999 by Lacy *et al.*, entitled "Graphic Design of Combinatorial Material Libraries"; and U.S. Ser. No. 09/305,830 filed May 5, 1999 by Rust *et al.*, entitled "Synthesizing Combinatorial Libraries of Materials", now U.S. Patent No. 6,507,945, issued January 14, 2003.

Please replace paragraph 4 with the following amended paragraph:

In particular, U.S. application Ser. No. ~~09/177,179~~ 09/177,170, U.S. Ser. No. 09/211,982, and U.S. Ser. No. 09/548,848 applications disclose a parallel pressure reactor (PPR™) having modular parallel, stirred reactors with temperature and pressure control. U.S. Ser. No. 09/239,233 discloses methodologies and software for controlling such parallel reactors. Although such parallel reactors can be advantageously applied for many polymer research applications (synthesis or screening of materials), the disclosed reactor systems have only limited capabilities for providing multiple reactants to the reaction vessel during the reaction.

Please replace paragraph 5 with the following amended paragraph:

Additionally, U.S. Ser. No. 09/205,071 discloses a parallel research reactor that can be adapted for semi-continuous (i.e., semi-batch) or continuous flow operation with one or more feed streams provided to each reactor. Although such a parallel reactor can be advantageously applied for polymer research applications and other research applications requiring ~~semicontinuous~~ semicontinuous or continuous feed, improvements in the disclosed multiple-feed capabilities are desirable, particularly with respect to higher-pressure applications.

Please replace paragraph 54 with the following amended paragraph:

In the preferred embodiment, in which the reaction vessels are provided in a reactor block comprising a ~~base block~~ base block 530 and a ~~header block~~ header block 540 with ~~reaction cavities~~ reaction cavities 510 formed in the base block and/or the header block, the reactor block can further comprise one or more ~~header gaskets~~ header gaskets 541 situated between the header block and the base block (Figs. 4E, 4F, and partially in 4G). The ~~header gasket(s)~~ header gasket(s) 541 can serve as seals (as discussed above), and can additionally or alternatively also be adapted to mask the portion(s) of the ~~header block~~ header block 540 that are exposed to the reaction cavity ~~(cavities)~~ (cavities) 510. Specifically, a ~~header gasket~~ header gasket 541 can be a unitary, disposable header gasket having two or more, preferably four or more masking regions that correspond (in number, and in shape) to the ~~reaction cavities~~ reaction cavities 510 (i.e., to the exposed portions of the ~~header block~~ header block 540 within the reaction cavities).

Please replace paragraph 65 with the following amended paragraph:

As an alternative to, or in addition to a disposable shaft (*e.g.*, a disposable second lower shaft 852), the stirring system can, for each shaft-driven impeller, also comprise one or more ~~shaft covers~~ shaft covers 864 adapted to mask at least a non-disposable portion of the shaft-driven impeller. Specifically, with reference to FIGS. ~~3A through 31, a shaft cover (not shown)~~ 3A and 3G, shaft covers 864 can mask the entire shaft 850 (including the impeller portion), or a portion thereof – such as masking a first, non-disposable upper shaft 851 of a two-piece shaft 850, where the second lower shaft 852 is a disposable shaft. Use of such disposable ~~shaft covers~~ shaft covers 864 facilitates clean-up after the reaction of interest.

Please replace paragraph 73 with the following amended paragraph:

The particular design of the feed-line ~~subassemlies~~ subassemblies is not narrowly critical. In one exemplary embodiment, a feed-line entrance bracket having at least two, preferably at least three, more preferably at least four individual mechanical fittings (e.g. swage-lock type fittings) mounted on a common bracket can be employed as the feed-line ~~subsassembly~~ subassembly. In a preferred embodiment, with reference to FIG. 4H and FIGS. 5B through 5H, the modular feed-line subassembly can be a ferrule 560 (referenced as shown without a fastener in FIGS. 5D through 5H by reference numeral 560'). The ferrule 560 (560') comprises two or more apertures 562 adapted to support, and preferably to ~~scalingly~~ sealingly support the at least two feed lines 300 when the ferrule 560 is engaged with the reactor block 520 (e.g., with header block 540). Regardless of the particular configuration for the modular feed-line subassembly, the subassembly is preferably engaged either with the header block 540 (as shown) or alternatively with the base block 530 of the reactor block 520. In a preferred embodiment, the header block 540 or the base block 530 can comprise four or more feed-line subassembly receiving ports 570. Each of the receiving ports 570 is in fluid communication with the reaction cavity 510 (and with the reaction vessel 500) and is adapted to receive one of the ferrules 560, and preferably to releasably and to ~~sealangly~~ sealingly engage one of the ferrules 560. With reference to FIGS. 5E through 5H, each of the one or more ferrules 560' comprises a first interior end 561 for insertion into the corresponding receiving port 570 in the reactor block 520, a second exterior end 563 substantially opposing the first interior end 561, two or more, preferably four or more internal apertures 562 extending from the first interior end 561 to the second exterior end 563 for supporting the at least four liquid feed lines 300 passing into one of the reaction vessels 500. The ferrules 560' further comprise an external side surface 564 including a tapered portion 565, the tapered portion 565 having a smaller cross-section at positions closer to the first interior end 561 relative to positions farther from the first interior end 561, the tapered portion 565 being configured to correspond to a tapered surface 572 defining a portion of the receiving port 570. The ferrule 560' also comprises a fastener 568 for releasably engaging at least the tapered portion 565 of the ferrule 560 (560') with the corresponding tapered surface 572 of the receiving port 570. The fastener 568 can be, for example, a hollow threaded nut that engages corresponding threads on the receiving port 570. The ferrule 560' can be of a compressible material such that when engaged, the tapered portion 565 of the ferrule 560' seals with the corresponding tapered surface 572 of the receiving port 570, and each of the at least two apertures 562 seals the

corresponding at least two feed lines 300. In any case, as shown in FIG. 5D, preferably two or more modular feed-line subassemblies 560 can provide feed lines 300 to the same reaction cavity 510/reaction vessel 500. The two or more feed-line subassemblies 560 can be orientated on the same side or different (e.g., opposing) sides of the reactor block (e.g., header block).

Please replace paragraph 77 with the following amended paragraph:

The first and second sections of the feed line can be detachably connected (releasably engaged) from each other by an suitable approach, including for example individual mechanical connectors (e.g., union couplers), or thermal heat-shrinking. In a preferred approach with reference to FIGS. 4H and 6A, a parallel feed-line interface 580 can provide for fluid communication between a first section 300a and a second section 300b of each of at least four liquid feed lines 300. The feed-line interface 580 can comprise a modular first source-side piece 581 and a modular second reactor-side piece 582 that are releasably ~~engagable~~ engageable (e.g., through a bolted connection) with each other to provide the fluid communication between the first and second sections 300a, 300b of the feed line 300. Additionally or alternatively, the interface 580 can be releasably connected to the first section 300a (e.g., through heat shrink of the first section 300a onto annular nodules 584 of the first source-side piece 581, as shown in FIG. 6A) and additionally or alternatively, to the second section 300b (e.g., through mechanical connectors 586, of each of the at least four liquid feed lines). As shown, the interface 580, 580' can be mounted on or otherwise supported by the reactor block, but could alternatively (or additionally for additional interfaces 580, 580') be separate from the reactor block (e.g., used for multiple connections elsewhere in the feed distribution system, such as by the one or more distribution valves 400).

Please replace paragraph 78 with the following amended paragraph:

The junction point between the first and second sections 300a, 300b of feed lines 300 can be external to the reaction cavity (e.g. as shown in FIG. 6A, with parallel ~~inerface~~ interface 580 connection), or can be internal to the reaction cavity (e.g. as shown in FIG. 5D, with individual heat-shrink connection)- More particularly in one embodiment, the first section 300a is positioned entirely outside of the reaction cavity 510, or at least partially outside of the reaction cavity 510, preferably at least outside of the reaction vessel 500--such that it is substantially uncontaminated by the liquid reaction mixture (i.e., can be used again, preferably without or with

only nominal cleaning effort). Hence, at least a portion of the first section 300a can be inside the reaction cavity 510.